Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for determining locations of service instances for optimising distribution of a service in a Wide Area Network ~~network~~, the service instance providing the service from a source to a plurality of clients each having predetermined requirements, wherein said network can be modelled by means of a graph, said method comprises steps of:

placing a service instance in each leaf in said graph; and

starting from the leaves, for each service instance:

checking whether the service instance when placed in a vertex on the next higher level can fulfil the requirements of all clients to be served by said service instance; and

depending on the result of the checking step, moving said service instance one level higher to minimize a number of service instances necessary to provide the service to the clients.

2. (Previously Presented) A method according to claim 1, further comprises the steps of determining that at least two service instances meet in said vertex and combining said service instances into one service instance.

3. (Previously Presented) A method according to claim 1, further comprises a step, prior to said placing step, of determining levels in said graph.

4. (Previously Presented) A method according to claim 1, wherein said checking step comprises a table-based analysis step.

5. (Previously Presented) A method according to claim 1, wherein said checking step comprises a Petri net analysis step.

6-7. (Cancelled)

8. (Currently Amended) A device for determining locations of service instances for optimising distribution of a service in a Wide Area Network ~~network~~, the service instance providing the service from a source to a plurality of clients each having predetermined requirements, wherein said Wide Area Network ~~network~~ can be modelled by means of a graph, comprising:

lodging means, for hosting a service instance;

checking means, for checking whether the service instance when placed in a vertex on the next higher level can fulfil the requirements of all clients to be served by said service instance;

processing means, for coordinating said lodging means and said checking means and for controlling said vertex;

means for moving the service instance to minimize a number of service instances necessary to provide the service to the client; and

input/output means, for sending and receiving messages and service instances.

9. (Previously Presented) A device according to claim 8, further comprises combining means, for determining that at least two service instances meet in said vertex and for combining said service instances into one service instance.

10. (Cancelled)

11. (Currently Amended) A system for determining locations of service instances for optimising distribution of a service in a Wide Area Network ~~communication network~~, the service instance providing the service from a source to a plurality of clients each having predetermined requirements, wherein said Wide Area Network ~~communication network~~ can be modelled by means of a graph, comprising:

means for placing a service instance in each leaf in said graph;

means for starting with each leave and determining whether said service instance, when place in a vertex on the next higher level, can fulfill the requirements of all clients to be served by said services instances;

in response to an affirmative determination, means for moving said service instance one level higher to minimize a number of service instances necessary to provide the service to the clients.

depending on the result of the checking step, moving said service instance one level higher to minimize a number of service instances necessary to provide the service to the clients.

12. (Previously Presented) The system of claim 11 further comprises the means for determining that at least two service instances meet in said vertex and further combing said two service instances into one service instance.

13. (Previously Presented) The system of claim 11 further comprises the means for determining levels in said graph prior to placing said service instance in said each leaf in said graph.

14. (Previously Presented) The system of claim 11 wherein said means for determining further comprises a table-based analysis means.

15. (Previously Presented) The system of claim 11 wherein said means for determining further comprises a Petri net analysis means.